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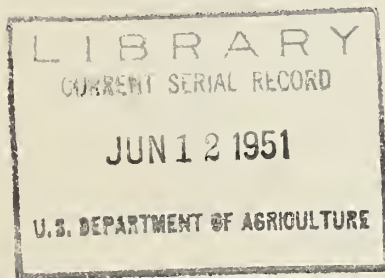
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FARM CREDIT ADMINISTRATION  
UNITED STATES DEPARTMENT OF AGRICULTURE  
WASHINGTON, D. C.

FROZEN FOOD LOCKER COOPERATIVES  
IN ILLINOIS  
1949



By  
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COOPERATIVE RESEARCH AND SERVICE DIVISION

UNITED STATES DEPARTMENT OF AGRICULTURE  
FARM CREDIT ADMINISTRATION  
WASHINGTON 25, D. C.  
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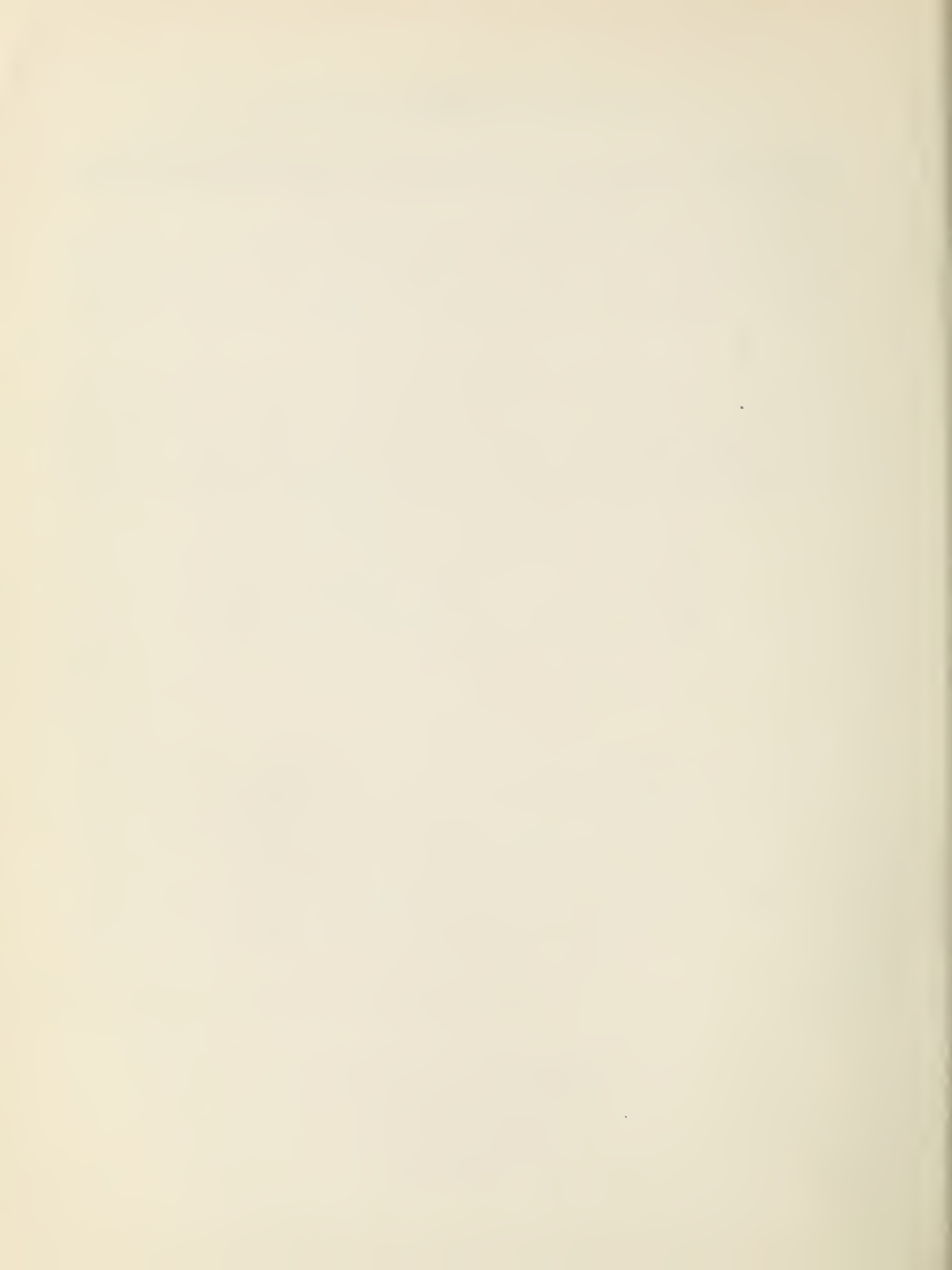
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## FOREWORD

Frozen food locker plants, during the past decade, have become firmly established as an improved method of processing and storing perishable home grown high energy foods.

This study, based on an analysis of 35 cooperative associations operating 93 locker plants, deals with a comparative analysis of investment, rates, charges, volume, power consumption, receipts, expenses, and net savings. Information is also presented to show the changes that have occurred in recent years and the factors responsible for these changes.

The frozen food locker industry is in a position to render valuable service in a war emergency due to its wide distribution of processing facilities and storage stocks, in minimizing demand on overburdened transportation facilities, in saving critical packaging materials such as tin and aluminum, in utilizing available small town labor, in holding down excessive distribution costs, and in conserving and storing perishable foods for local distribution and consumption.





## SUMMARY

The slowing down of construction and expansion of locker plants, evident in 1948, continued in 1949. Increased competition, mounting operating costs, lessened demand for rentals, together with tighter credit, all were factors which made it more difficult for many locker plants to make satisfactory savings. This was especially true of those associations which recently constructed high-cost facilities.

Findings of this study show:

Total assets of 34 associations operating 93 locker plants amounted to \$3,287,000, or an average of \$96,700 per association, which was \$2,400 more per association than a year ago. Original investment in fixed assets now totals \$3,505,000, or an average of \$76.48 per locker. In 1948, fixed assets averaged \$66.72 per locker, compared with \$48.60 in 1946. Total net worth of the associations was approximately \$2,055,000, of which 94 percent was capital stock, and 6 percent retained net savings, compared with 88 percent capital stock and 12 percent net savings in 1948.

Receipts in 1949 averaged \$42,996 per association, an increase of \$1,067, or \$1.57 per locker more than the preceding year. Thirty-nine percent of receipts was derived from locker rentals; 28 percent from cutting, wrapping, freezing, and grinding operations; 17 percent from additional processing such as slaughtering, curing, smoking, rendering lard, dressing poultry, and processing fruits and vegetables; and 16 percent from sales and other income. The proportion of total receipts received from each of the major services showed little change from a year ago. For the 6-year period, 1943-44 to 1948-49, total receipts per locker rented increased nearly 54 percent. Of this total increase, rentals accounted for 15 percent; processing, 48 percent; and other receipts, principally sales, 37 percent.

Total operating expenses averaged \$42,668 per association, or \$34.11 per locker rented, compared with \$39,143 per association, and \$30.55 per locker a year ago. Labor, depreciation, and utilities are the three major expense items, amounting to nearly three-fourths of all expenses. The cost of labor and management alone accounted for nearly half of all operating expenses. For the 5-year period, 1943-44 to 1948-49, total operating expenses per locker rented increased 84 percent. Of this total increase, labor expense accounted for 47 percent; utilities, 9 percent; fixed charges, 29 percent; and other expenses, 15 percent.

Savings, before deducting income taxes and interest, averaged \$710 per association, or 57 cents per locker rented; but, after deducting these items, net savings showed a loss of \$683 per association, or 55 cents per locker. Compared with a year ago, net savings, before income taxes and interest, declined \$2,567 per association, or a drop of 78 percent. Net savings per locker rented were the lowest in the past 6 years. Savings,

before paying income taxes and interest, averaged only 1.6 percent of total receipts, compared with 7.7 percent in 1948, 12.6 percent in 1947, and 18 percent in 1944.

Meat and poultry, processed by 35 associations, amounted to 7,140 tons, and averaged 326 pounds per locker rented, slightly less than last year. The volume processed per locker in 1948-49 was the lowest reported in the past 5 years.

Labor and management cost per dollar of processing income averaged \$1.01, or 3 cents lower than the previous year, but still above the average of the 6 years from 1944 to 1949. Reduced volume processed per locker, higher labor rates, plus continued inefficient use of labor was largely responsible for this poorer showing.

Rates and charges increased moderately over the previous year. Locker rentals averaged \$13.31, or 36 cents more than last year, while charges for cutting, wrapping, freezing, and grinding averaged 3 cents per pound, which was slightly above last year.

The proportion of installed lockers that were rented averaged 92 percent, compared with 90 percent a year ago. Some plants, however, had only 75 percent of their lockers rented.

Slaughter volume in most associations continued low during the year. The average of 18 associations was 405 cattle and 967 hogs per year. This represents an increase of 47 cattle and 69 hogs per association over last year.

Volume of poultry dressed and processed, while greater than last year, is of minor importance in most associations.

Power consumption showed but little change from last year. Yearly consumption per locker averaged 71 kilowatt-hours in 1949, compared with 72 kilowatt-hours in 1948, and 73 kilowatt-hours in 1947.

During the period covered by this study practically no new construction took place. Twenty-two of the 35 associations provide facilities for slaughtering, 31 of them do curing and smoking, and 31 render lard.

In general, the associations made the poorest showing of the past 9 years. Only 23 percent of the associations had net savings, before paying income taxes and interest, of over 10 percent of gross income, compared with 58 percent in 1948. Thirty-one percent showed losses in 1949, compared with 19 percent in 1948. Associations making the poorest showing were, for the most part, those with high-cost facilities constructed in recent years. Increased competition, low processing volume, high seasonal fluctuations in processing income, high labor and power costs, and too many unrented lockers were major factors adversely affecting operating results in 1949.



The findings of the study indicate the need for more efficient use of labor and facilities, increased volume, more efficient use of byproducts, closer attention to details, an analysis of internal costs, improved processing methods, expanded services, evening out of seasonal processing volume, and a more aggressive and intelligent merchandising program.

In the emergency now facing the country, locker plants are in a unique position to play an important role in the conservation and storing of high-energy food, in minimizing the strain on overburdened transportation facilities, in saving critical packaging materials, and in holding down excessive distribution costs. The period ahead presents both difficult operating problems and increased opportunities. The manner in which locker plant operators serve the public during this emergency may largely determine the industry's future.



# FROZEN FOOD LOCKER COOPERATIVES IN ILLINOIS

1949

By

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The rapid expansion of frozen food locker plants, starting at the end of World War II, slowed down sharply after 1948 due to high construction costs, increased operating costs, keener competition, tighter credit, and reduced earnings. On July 1, 1950, the number of locker plants in operation totaled 11,596, compared with 11,245 on the same date in 1949.

Total number of locker plants in Illinois on July 1, 1950, was 596. About 20 percent of these plants were owned and operated by farmer cooperatives.

## PURPOSE

This survey was made at the request of the Illinois Cooperative Locker Service. It is based on an analysis of 35 associations operating 93 plants affiliated with the State association. The plants have a capacity of approximately 50,000 lockers, with 47,600 installed. Information on operations was furnished by the State and county associations.

The purpose of this study is to provide directors, plant managers, and others, responsible for and interested in locker plants, with information on their operations and the relative efficiency of each association.

Information is presented on operations for earlier years so that comparisons can be made with current operations.

All associations have facilities for chilling, aging, cutting, wrapping, and freezing. Thirty-one cure and smoke meat, 31 render lard, and 22 operate slaughter facilities. The period covered by this study is the fiscal year of each association ending in 1949, with the exception of 5 associations with fiscal years ending early in 1950.

## BALANCE SHEETS

The composite balance sheet covering 34 of the 35 associations studied is shown in table 1. The balance sheet of one association was not used because it was impossible to segregate its other operations from that of the locker business.

NOTE: The authors express their appreciation to Jane H. Click for assistance in preparing this report.

Table 1. - Composite and average balance sheet for 34 Illinois locker cooperatives, 1949<sup>1</sup>

Assets	Composite of 34 associations	Average association	Percent	Liabilities	Composite of 34 associations	Average association	Percent
<b>Current assets:</b>				<b>Current liabilities:</b>			
Cash on hand and in bank-----	\$146,170.45	\$4,299.13	4.45	Accounts payable-----	\$56,982.41	\$1,675.95	1.73
U. S. Government securities-----	43,489.20	1,279.09	1.32	Notes payable-----	225,399.32	6,629.39	6.86
Accounts receivable - trade-----	139,072.98	4,090.38	4.23	Taxes payable (Social Security, State, and local)-----	13,740.95	404.15	.42
Accounts receivable - other-----	8,191.58	240.93	.25	Federal income tax payable-----	13,840.55	407.08	.42
Reserve for doubtful accounts-----	(7,810.31)	(229.71)	(.24)	Accrued expenses payable-----	16,676.91	490.50	.51
Merchandise inventory-----	59,304.61	1,744.25	1.81	Dividends payable - preferred stock-----	19,305.08	567.80	.59
				Patronage refund payable-----	4,996.12	146.94	.15
				Accrued interest-----	6,650.09	195.59	.20
				Reserve for expenses payable-----	1,547.17	45.50	.05
<b>Total current assets-----</b>	<b>388,418.51</b>	<b>11,424.07</b>	<b>11.82</b>	<b>Total current liabilities-----</b>	<b>359,138.60</b>	<b>10,562.90</b>	<b>10.93</b>
<b>Deferred charges:</b>							
Prepaid plant supplies and expense-----	37,021.24	1,088.86	1.13	Deferred income:			
Prepaid insurance and bonding-----	35,144.12	1,033.65	1.07	Unearned locker rentals-----	217,554.81	6,398.67	6.62
Other deferred charges-----	678.13	19.95	.02				
<b>Total deferred charges-----</b>	<b>72,843.49</b>	<b>2,142.46</b>	<b>2.22</b>	<b>Noncurrent liabilities:</b>			
<b>Investments:</b>				Notes payable-----	632,803.19	18,611.86	19.25
Stock - other cooperatives-----	70,426.10	2,071.35	2.14	Key deposit-----	22,322.02	656.53	.68
				<b>Total noncurrent liabilities-----</b>	<b>655,125.21</b>	<b>19,268.39</b>	<b>19.93</b>
<b>Fixed assets:</b>				<b>Total liabilities-----</b>	<b>1,231,818.62</b>	<b>36,229.96</b>	<b>37.48</b>
Land-----	97,905.97	2,879.59	2.98	<b>Net worth</b>			
Plant and equipment-----	3,407,597.04	100,223.44	103.67	Capital stock:			
				Issued and outstanding-----	1,927,765.01	56,698.97	58.65
<b>Total fixed assets-----</b>	<b>3,505,503.01</b>	<b>103,103.03</b>	<b>106.65</b>	Retained net savings-----	127,386.86	3,746.67	3.87
<b>Less: Reserve for depreciation----</b>	<b>(750,220.62)</b>	<b>(22,065.31)</b>	<b>(22.83)</b>	<b>Total net worth-----</b>	<b>2,055,151.87</b>	<b>60,445.64</b>	<b>62.52</b>
<b>Net book value-----</b>	<b>2,755,282.39</b>	<b>81,037.72</b>	<b>83.82</b>	<b>Total liabilities and net worth-----</b>	<b>3,286,970.49</b>	<b>96,675.60</b>	<b>100.00</b>
<b>Total assets-----</b>	<b>3,286,970.49</b>	<b>96,675.60</b>	<b>100.00</b>				

<sup>1</sup>Association 14 excluded because its locker operation is combined with other business enterprise.

SOURCE: Based on audit reports.

The combined balance sheet shows that total assets of the 34 associations amounted to \$3,286,970, an average of \$96,676 per association, or \$2,402 more than a year ago. Investment in fixed assets, after deducting depreciation, totaled \$2,755,282, an average of \$81,038 per association, or \$1,721 more per association than last year.

Original investment in fixed assets averaged \$76.48 per locker in 1949, compared with \$66.72 in 1948, \$59.19 in 1947, and \$48.60 in 1946. The depreciated value of fixed assets averaged \$60.11 per locker in 1949.

Net worth of all associations totaled \$2,055,152, an average of \$60,446 per association. This represents an increase of \$5,550 per association over a year ago. Ninety-four percent of net worth consists of capital stock, and only 6 percent of retained net savings, compared with 88 percent capital stock and 12 percent retained net savings a year ago. Members' equity amounted to 63 percent of total assets in 1949, compared with 58 percent in 1948.

The balance sheet shows the ratio of current assets to current liabilities as 1.08 to 1. Most analysts consider that current assets should be twice as large as current liabilities.

Retained net savings now total \$127,387, or \$98,195 less than a year ago. Approximately 25 percent of this decline is due to loss in operations during the year and most of the remainder went to pay dividends on preferred stock. In ratio to outstanding capital stock, retained net savings were at their lowest point during the past 6 years. The amount of retained net savings for each dollar of outstanding capital stock in each year beginning in 1944 was:

1944	\$0.20
1945	.21
1946	.16
1947	.14
1948	.13
1949	.07

Borrowed funds totaled \$858,202 of which \$225,399 were current borrowings, and \$632,803 were of a long time nature. Compared with a year ago, borrowed funds declined \$45,698. For each dollar of fixed assets, at book or depreciated value, the total amount of borrowed funds in each year beginning with 1944 was:

1944	\$0.08
1945	.17
1946	.17
1947	.27
1948	.27
1949	.23



## OPERATING STATEMENTS

The figures in table 2 showing receipts and expenses were assembled from the associations' audit reports and cover 2 fiscal years. Thirty-five associations were included in the 1948-49 analysis and 36 in the 1947-48 analysis. As the same number of associations is not shown for both periods, the data of most value are those showing average income,<sup>1</sup> expense, and savings. On the average, both income and expenses were larger than the preceding year. Total operating income averaged \$42,997 per association, and \$1,067 more than the preceding year. Earned locker rentals increased only \$48 per association and showed a slight decline from 40 percent to 39 percent of total operating income. Cutting, wrapping, freezing, and grinding services produced \$495 more per association than the preceding year and accounted for nearly the same proportion ... 28 percent ... of total operating income. Curing and smoking income per association averaged almost the same as last year and accounted for 6 percent of total income. Income from slaughtering increased \$348 per association and accounted for slightly more than 5 percent of the total income or about the same as last year. Sales of inedible byproducts declined \$1,783 per association from a year ago and dropped from 9 to less than 5 percent of total income. This was due largely to a sharp break in prices of hides and offal. Gross margins<sup>2</sup> from merchandising increased \$1,550 per association and accounted for 10 percent of total income, compared with 7 percent the previous year.

Important factors contributing to changes, compared with a year ago, were reduced income from the sale of inedibles and increased returns from merchandising.

The small gains shown in income, however, were more than offset by greater increases in expenses. Total operating expenses increased from \$39,143 per association in 1947-48 to \$42,669 in 1948-49.

Salaries and wages accounted for 33 percent of the increase; depreciation and rent, 21 percent; repairs, 11 percent; utilities, 10 percent; bonding and insurance, 9 percent; and supplies, 4 percent. As a percentage of total operating expense, however, the various expenses showed little change. Labor increased 1 percent; depreciation, 1 percent; and other items remained about the same as last year.

Trends in income, expenses, and net savings per locker rented from 1943-44 to 1948-49 are shown in table 3. For the 6-year period total income increased \$12.09 per locker, of which \$5.83 came from processing, \$1.78 from rentals, and \$4.48 from other sources. Along with this substantial gain in revenue, expenses increased \$15.59 per locker in the same period. Labor accounted for \$7.37 of this increase; fixed charges,

<sup>1</sup>The term "income" is used in this report because it is in customary use by the Illinois locker cooperatives and therefore is well understood by their managements and patrons. Most cooperative authorities do not favor the use of the word "income" to describe the normal operating receipts of a cooperative which is obligated by agreement to distribute such receipts, less expenses and other authorized deductions, to its patrons in proportion to the volume of business done with each patron.

<sup>2</sup>Gross margins as here used is the excess of sales value over the cost of purchases. Gross margins should also include a deduction covering processing costs.



Table 2. - A comparison of composite and average income and expense statements, Illinois locker cooperatives, 1948-49 and 1947-48

Item	Fiscal years ending between May 1, 1949, and June 30, 1950			Fiscal years ending between March 31, 1948, and February 28, 1949			Average increase or decrease
	Composite of 35 associations	Average	Percentage of operating income	Composite of 36 associations	Average	Percentage of operating income	
<b>Income:</b>							
Earned locker rentals-----	\$582,538.81	\$16,643.97	38.71	\$597,443.46	\$16,595.65	39.58	\$48.32
Cut, wrap, freeze, and grind-----	418,555.36	11,958.72	27.81	412,697.18	11,463.81	27.34	494.91
Cure and smoke-----	86,322.54	2,466.36	5.74	89,350.58	2,481.96	5.92	(15.60)
Lard render-----	40,558.51	1,158.81	2.70	32,296.04	897.11	2.14	261.70
Slaughter-----	85,710.79	2,448.88	5.69	75,646.30	2,101.29	5.01	347.59
Poultry processing-----	24,597.62	702.79	1.63	19,767.80	549.11	1.31	153.68
Fruits and vegetables-----	24,382.02	696.63	1.62	29,593.68	822.05	1.96	(125.42)
<b>Sales:</b>							
Inedible sales-----	72,690.69	2,076.88	4.83	138,941.63	3,859.49	9.21	-1,782.61
Food and supplies-----	153,621.73	4,389.19	10.21	102,219.67	2,839.43	6.77	1,549.76
Other plant income-----	15,905.55	454.44	1.06	11,494.36	319.29	.76	135.15
<b>Total operating income-----</b>	<b>1,504,883.62</b>	<b>42,996.67</b>	<b>100.00</b>	<b>1,509,450.70</b>	<b>41,929.19</b>	<b>100.00</b>	<b>1,067.48</b>
<b>Expenses:</b>							
Salaries and wages-----	724,292.04	20,694.06	48.13	703,054.22	19,529.28	46.57	1,164.78
Utilities-----	161,247.58	4,607.07	10.71	152,677.67	4,241.05	10.12	366.02
Laundry-----	11,673.24	333.52	.78	11,745.21	326.26	.78	7.26
Plant supplies-----	107,636.16	3,075.32	7.15	105,324.30	2,925.67	6.98	149.65
Plant repairs-----	51,387.13	1,468.20	3.41	38,795.28	1,077.65	2.57	390.55
Licenses and taxes-----	42,143.85	1,204.11	2.80	37,455.32	1,040.42	2.48	163.69
Bonding and insurance-----	49,710.53	1,420.30	3.30	40,026.88	1,111.86	2.65	308.44
Educational and promotional-----	24,798.79	708.54	1.65	21,193.14	588.70	1.41	119.84
Directors' per diem, legal and audit-----	27,659.89	790.28	1.84	26,756.43	743.23	1.77	47.05
Office supplies and expenses-----	30,820.43	880.58	2.05	30,952.74	859.80	2.05	20.78
Bad debts and losses-----	7,488.09	213.95	.50	8,429.62	234.16	.56	-20.21
Truck, auto, and mileage-----	18,220.42	520.58	1.21	14,620.30	406.12	.97	114.46
Depreciation and rent-----	228,882.48	6,539.50	15.21	209,079.35	5,807.76	13.85	731.74
Other expenses-----	7,441.55	212.62	.50	9,035.33	250.98	.60	(38.36)
<b>Total operating expenses-----</b>	<b>1,493,402.18</b>	<b>42,668.63</b>	<b>99.24</b>	<b>1,409,145.79</b>	<b>39,142.94</b>	<b>93.36</b>	<b>3,525.69</b>
<b>Net operating income-----</b>	<b>11,481.44</b>	<b>328.04</b>	<b>.76</b>	<b>100,304.91</b>	<b>2,786.25</b>	<b>6.64</b>	<b>-2,458.21</b>
<b>Other income:</b>							
Nonoperating and miscellaneous-----	13,377.43	382.21	.89	17,687.60	491.32	1.17	-109.11
<b>Total-----</b>	<b>24,858.87</b>	<b>710.25</b>	<b>1.65</b>	<b>117,992.51</b>	<b>3,277.57</b>	<b>7.81</b>	<b>-2,567.32</b>
<b>Other expenses:</b>							
Interest-----	36,205.84	1,034.45	2.41	35,056.66	973.80	2.32	60.65
Federal income taxes-----	12,561.30	358.89	.83	24,622.76	683.96	1.63	-325.07
<b>Total other expenses-----</b>	<b>48,767.14</b>	<b>1,393.34</b>	<b>3.24</b>	<b>59,679.42</b>	<b>1,657.76</b>	<b>3.95</b>	<b>-264.42</b>
<b>Net savings or loss-----</b>	<b>- \$23,908.27</b>	<b>- \$683.09</b>	<b>- 1.59</b>	<b>\$58,313.09</b>	<b>\$1,619.81</b>	<b>3.86</b>	<b>- \$2,302.90</b>

<sup>1</sup>Net loss of 1.59 percent based on total operating income. In table 8 net loss of 1.57 percent based on total gross income.

SOURCE: Based on audit reports.

Table 3. - Income, expense, and net savings per locker rented before paying income taxes and interest, Illinois locker cooperatives, 1943-44 to 1948-49

Item	1943-44		1944-45		1945-46		1946-47		1947-48		1948-49	
	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent
Income:												
Rentals-----	11.53	51	11.69	51	12.02	47	12.54	42	12.95	39	13.31	38
Processing-----	9.70	43	9.96	43	11.89	46	13.69	46	14.30	43	15.53	45
Other-----	1.36	6	1.44	6	1.75	7	3.51	12	5.86	18	5.84	17
Total-----	22.59	100	23.09	100	25.66	100	29.74	100	33.11	100	34.68	100
Expenses:												
Labor-----	9.17	41	10.14	44	11.60	45	13.46	45	15.24	46	16.54	48
Utilities-----	2.30	10	2.40	10	2.66	10	2.78	9	3.31	10	3.68	11
Fixed charges <sup>1</sup> --	3.96	17	4.38	19	4.22	17	5.35	18	7.05	21	8.50	24
Other-----	3.09	14	3.29	15	3.48	14	4.41	15	4.95	15	5.39	15
Total-----	18.52	82	20.21	88	21.96	86	26.00	87	30.55	92	34.11	98
Net savings-----	4.07	18	2.88	12	3.70	14	3.74	13	2.56	8	.57	2

<sup>1</sup>plant repairs, depreciation, rent, insurance, bonding, licenses, and taxes.

SOURCE: Based on audit reports.

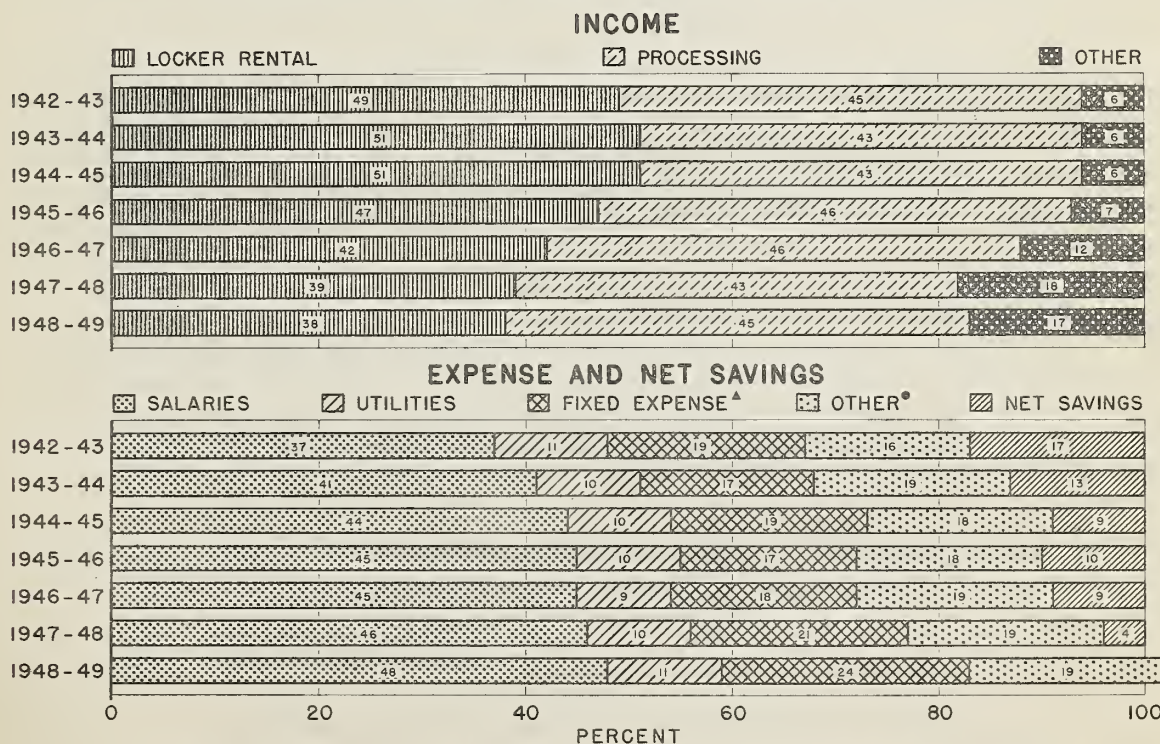
\$4.54; other expenses, \$2.30; and utilities, \$1.38. For this 6-year period net savings, before deducting income taxes and interest, declined from \$4.07 in 1943-44 to 57 cents per locker in 1948-49.

The increase in total income was due largely to increased processing and sales. Increase in expenses is accounted for by higher labor costs, and fixed charges.

Changes in average income, expense, and net savings for a 7-year period, 1942-43 to 1948-49, are shown as percentages in figure 1. During the first 3 years, locker rentals represented over 50 percent of total income, while in 1948-49 they were only 38 percent. Processing income, which ranged from 43 percent to 46 percent for the 7-year period, showed no definite trend. The greatest change in percentage income is in other income, largely increased sales, which went from 6 percent of total income in the first 3 years to 17 percent in 1948-49.

Most important changes in expenses for the 7-year period took place in labor costs. The cost of labor increased from 37 percent of total income in 1942-43 to 48 percent in 1948-49. Next to labor, fixed expenses show the greatest increase, from 17 to 24 percent. Utilities

FIGURE 1  
AVERAGE INCOME AND EXPENSE, ILLINOIS LOCKER  
COOPERATIVES, 1942-43 TO 1948-49



<sup>A</sup> PLANT REPAIRS, DEPR., RENT, INSURANCE, BONDING, LICENSES AND TAXES.

<sup>•</sup> INCLUDES INCOME TAX AND INTEREST.



and other expenses have shown very little change percentagewise during the period.

Net savings, after paying income taxes and interest, as a percentage of total receipts declined from 17 percent in 1942-43 to a loss of 1.5 percent in 1948-49. Increased cost of labor is one of the most important factors contributing to this decline.

### ANALYSIS OF INCOME BY ASSOCIATIONS

Table 4 shows income by major items for each association. To make the information comparable, income is shown on a locker-rented basis.<sup>3</sup> Where associations were engaged in activities not related to their locker operations the receipts and expenses of these "outside" operations were excluded. Because most of the associations charged rather similar rates for cutting, wrapping, freezing, and grinding no attempt was made to group them separately. Associations are listed by code numbers according to net savings per locker rented. Average income for each service is the average for only those associations offering the service.

Average gross income for the 35 associations was \$34.68 per locker rented compared with \$33.11 the previous year, an increase of less than 5 percent.

Locker rentals for the entire group averaged \$13.31 per locker, compared with \$12.95 last year. Rentals ranged from \$11.48 to \$16.01. Although average locker rentals were higher than last year they represented a lower percentage of total receipts; a downward trend which has been in progress for a number of years.

Income from cutting, wrapping, freezing, and grinding varied considerably among associations. It ranged from \$5.04 to \$16.51, and averaged \$9.56 per locker for the entire group, compared with an average of \$8.95 the previous year. This increased income was due entirely to increases in average rates, as there was a decline in average volume processed per locker.

The third largest item of income was the gross margin on the sale of food and supplies which averaged \$3.51 per locker, compared with \$2.22 a year ago. This is in keeping with a trend toward increased merchandising which is taking place throughout the industry. Slaughter income was fourth with an average of \$2.75 per locker, approximately the same as a year ago.

Average income from the sale of inedible byproducts at \$1.66 per locker was \$1.35 below the average of a year ago. This was due largely to the severe decline in prices received for these products.

<sup>3</sup>Number of lockers rented during the year was computed by dividing earned locker rental income by average rental rate.

Table 4. - Comparative analysis of income per locker rented for 35 Illinois locker cooperatives, 1948-49

Association (Code no.)	Earned locker rentals	Processing					Sales			Non- operat- ing income	Total income
		Cut, wrap, freeze, and grind	Cure and smoke	Lard render	Slaughter	Poultry <sup>1</sup>	Fruits and vegetables	Inedible products	Food and supplies <sup>2</sup>		
27-----	\$16.01	\$15.95	\$5.86	\$3.71	\$3.89	\$0.47	\$0.57	\$4.04	\$0.48	\$0.06	\$51.04
35-----	14.16	7.13	2.56	1.05	2.71	.55	.82	1.83	3.71	.05	34.57
3-----	12.99	9.04	1.83	.81	-	.51	.98	1.00	2.96	1.49	33.90
1-----	13.16	10.77	3.61	1.31	-	(3)	(3)	1.05	.11	.13	30.23
10-----	13.71	5.89	1.83	1.80	8.29	3.43	.87	3.24	39.06	1.06	78.56
13-----	12.62	9.43	2.37	1.08	-	.37	.32	.77	.59	.60	28.15
25-----	12.67	6.62	2.32	.56	-	.59	.88	.70	.59	.21	25.14
17-----	13.16	10.57	-	.10	-	(3)	.58	.82	.63	.17	28.58
4-----	12.74	15.40	2.33	2.11	-	(3)	(3)	.88	4.33	.10	38.27
5-----	13.23	11.91	1.42	-	1.66	(3)	(3)	1.89	3.28	.37	34.04
6-----	13.25	9.62	1.19	1.13	-	.49	.30	1.01	2.34	.16	29.60
31-----	13.87	9.16	3.40	.82	1.93	.52	.65	1.79	4.76	.05	36.95
32-----	13.81	7.77	1.46	.80	2.87	(3)	.77	1.54	5.55	1.67	36.43
18-----	12.14	7.91	1.74	1.11	2.44	1.31	.56	1.69	4.81	.11	33.82
22-----	13.31	11.02	1.83	.78	3.00	.82	.61	4.13	3.27	.10	38.87
11-----	12.72	9.95	3.74	1.39	.19	-	.31	.98	2.88	.43	32.59
30-----	12.29	8.95	.24	1.25	1.44	.67	.64	1.01	1.18	.03	27.70
2-----	11.48	12.73	3.42	1.27	-	.30	.22	1.09	2.28	.29	33.08
26-----	13.39	7.38	2.20	.52	1.68	(3)	.95	.85	.33	.07	28.35
15-----	12.19	13.76	2.37	.72	-	.60	.73	1.21	.86	(4)	32.44
19-----	12.60	5.32	-	-	1.81	(3)	.76	1.45	1.92	.04	23.90
28-----	14.60	6.39	2.11	.73	1.97	.65	1.46	.60	1.60	.03	30.14
7-----	14.51	8.62	1.50	.99	2.34	(3)	.33	1.55	2.64	.83	33.94
16-----	11.78	11.04	.19	.92	2.79	.38	.18	2.00	.20	.10	29.58
34-----	13.39	7.16	2.69	.69	2.11	.39	.66	1.54	1.44	.55	30.73
14-----	13.68	11.01	1.27	.45	1.99	.74	.46	1.60	4.18	.01	35.81
20-----	13.34	8.81	1.84	.79	2.04	(3)	(3)	1.96	1.47	.04	30.29
12-----	14.00	7.55	.66	.84	1.70	.46	1.21	1.16	.68	.03	28.29
23-----	14.35	6.19	2.20	1.31	4.92	.98	.58	1.42	5.02	.02	37.06
24-----	13.84	7.95	1.83	1.24	1.56	.69	1.24	1.79	2.74	.07	33.73
29-----	12.57	5.04	2.47	.78	-	.61	.89	.30	1.61	.01	25.03
33-----	14.01	9.80	1.65	1.24	.43	.59	.59	.66	.39	.05	29.41
8-----	15.13	9.35	2.91	1.38	10.23	.39	.49	4.38	3.01	.16	48.02
21-----	14.50	10.05	2.38	1.52	7.74	.55	.55	2.52	1.51	.77	43.61
9-----	12.49	16.51	2.13	1.44	1.98	3.92	.38	5.47	13.88	.26	59.13
Average <sup>3</sup> -----	13.31	9.56	2.07	1.01	2.75	.80	.65	1.66	3.51	.64	34.68

<sup>1</sup>Frequently includes fish and game processing.<sup>2</sup>After deducting cost of sales.<sup>3</sup>Combined with cutting, wrapping, freezing, and grinding.<sup>4</sup>Less than one-half cent per locker rented.<sup>5</sup>Average income per locker for each service computed on basis of lockers rented in only those associations showing income from those services. Total average income is average for all associations.

SOURCE: Based on audit reports.

Curing and smoking, one of the most profitable operations in a locker plant, averaged \$2.07 per locker and ranged from 24 cents to \$5.86. Income from curing and smoking was approximately the same as reported last year.

Income from poultry dressing and lard rendering was slightly above last year while fruit and vegetable revenue was about the same.

### ANALYSIS OF EXPENSES BY ASSOCIATIONS

Total operating expenses, as shown by table 5, for the 35 associations averaged \$34.11 per locker rented, compared with \$30.55 last year, an increase of nearly 12 percent. In the same period total income increased only 5 percent. Total expenses, including income taxes and interest, averaged \$35.23, compared with \$31.85 a year ago. Increases occurred in all major expense items with labor, depreciation, utilities, and repairs showing the greatest increases. Salaries and wages accounted for over 48 percent of operating expenses, and for nearly the same percentage of operating income. The average labor cost was \$16.54 per locker rented, or 9 percent more than a year ago.

Depreciation and rent, the second highest expense item, ranged from \$2.10 to \$16.06, and averaged \$5.23 per locker rented. Differences in investment in facilities and in depreciation rates largely account for the wide variation shown. Compared with a year ago depreciation costs per locker rented averaged 15 percent higher. Increases in labor and depreciation costs was largely responsible for the decline in savings.

Utility costs increased 11 percent per locker rented over a year ago. Average cost per locker was \$3.68, with a range from \$2.35 to \$7.64. Increased power rates, more processing services, and probably some deterioration in the efficiency of insulation and refrigeration equipment account for the increase.

Cost of plant supplies showed only a small advance over a year ago, averaging \$2.46 per locker. This was due to increased costs of packaging materials as volume processed was lower than a year ago. Repairs and maintenance costs averaged \$1.17, compared with 87 cents last year.

### SAVINGS AND LOSSES

Savings of all associations averaged 57 cents per locker rented, before paying income taxes and interest, but a loss of 55 cents after paying these items (table 5). Savings ranged from \$5.63 to a loss of \$27.59 per locker. Compared with a year ago, net savings, after deducting income taxes and interest, were \$1.81 per locker lower. This represents the lowest net savings for the past 9 years.

Table 6 compares net savings with gross income for the 35 associations, before and after paying income taxes and interest. Total gross income was \$1,518,261, or \$43,379 per association. Savings, before income



Table 5. - Comparative analysis of expenses per locker rented for 35 Illinois locker cooperatives, 1948-49

Association	Salaries and wages <sup>1</sup>	Utilities	Laundry	Plant supplies	Repairs and maintenance	Licenses and taxes	Bonding and insurance	Educational and promotional	Directors' per diem, legal, and audit
27-----	\$23.88	\$4.64	\$ .38	\$3.54	\$1.25	\$1.30	\$1.04	\$1.03	\$1.31
35-----	12.69	3.20	.10	2.08	.75	.97	1.58	.22	.34
3-----	14.79	2.90	.18	1.57	1.48	.66	.48	.38	.50
1-----	11.89	2.92	.28	2.29	.73	1.01	.32	.25	.42
10-----	39.73	6.23	.55	3.31	1.24	1.70	1.88	.84	.92
13-----	12.65	2.82	.29	1.86	.89	.34	.41	.24	.44
25-----	8.82	2.94	.17	2.15	1.39	.77	.45	.45	.73
17-----	15.32	2.54	.24	1.94	.56	.72	.38	.23	.49
4-----	18.81	2.93	.32	4.04	1.14	.64	.56	.58	.84
5-----	17.06	2.76	.21	2.14	.74	.88	1.21	.58	.40
6-----	11.82	2.71	.28	2.65	.98	.37	1.07	.74	.49
31-----	17.53	3.05	-	2.54	1.22	.89	.59	.51	.72
32-----	12.70	3.75	-	2.88	.54	.90	2.13	.38	.70
18-----	13.98	3.01	.31	2.54	.85	.82	1.57	.64	.37
22-----	18.26	4.80	.22	2.44	1.48	.86	.97	.49	.37
11-----	14.91	3.61	.35	2.29	1.14	.54	.46	.95	.94
30-----	11.38	4.62	.20	2.06	1.08	.75	.37	.74	.44
2-----	18.55	2.35	.40	3.15	.82	1.19	.87	.29	.79
26-----	10.62	4.55	-	2.04	.75	1.02	.92	.24	2.08
15-----	18.49	2.89	.26	2.87	.55	.05	.88	.58	.72
19-----	9.85	3.53	.14	.98	1.23	1.11	.78	.43	.51
28-----	9.34	4.45	.16	1.87	.47	.94	1.59	.38	.44
7-----	14.57	4.34	.28	1.81	1.48	1.29	1.24	.77	.41
16-----	18.24	2.60	.27	2.36	1.43	.15	.78	.19	.57
34-----	12.05	4.17	.14	2.62	1.97	2.10	.99	.78	.61
14-----	18.71	3.30	.33	2.55	.77	.62	.92	.87	.50
20-----	11.05	5.35	.24	3.04	.81	1.53	1.50	.14	.91
12-----	12.71	4.65	.22	1.86	1.30	.88	1.03	.41	.30
23-----	18.87	3.91	.46	2.50	.53	1.65	1.50	.91	1.13
24-----	17.02	3.68	.25	2.63	1.50	1.33	.83	.51	.62
29-----	10.08	4.20	.35	2.66	1.98	1.10	1.03	.79	.62
33-----	14.44	3.83	.45	1.47	1.64	.81	1.52	.53	1.50
8-----	30.06	6.16	.15	4.01	4.18	.94	2.69	.75	1.13
21-----	26.66	5.92	.44	4.16	1.56	2.34	3.82	.81	1.13
9-----	39.99	7.64	.45	3.99	1.51	2.04	4.32	1.36	1.36
Average <sup>2</sup> -----	16.54	3.68	.28	2.46	1.17	.96	1.14	.57	.63

Table 5. - Comparative analysis of expenses per locker rented for 35 Illinois locker cooperatives, 1948-49 - Continued

Association	Office supplies and expense	Bad debts and losses	Truck, auto, and mileage	Miscellaneous expense	Depreciation and rent	Total operating expense	Interest expense	Federal income tax	Total expense	Net savings or loss
27-----	\$0.40	\$0.05	-	-\$0.01	\$4.76	\$43.57	\$0.35	\$1.49	\$45.41	\$5.63
35-----	.31	.05	-	-	4.78	27.07	.55	1.46	29.08	5.49
3-----	.58	.12	\$0.20	.03	4.28	28.15	.45	1.19	29.79	4.11
1-----	.38	.06	.39	.06	4.01	25.01	.40	1.06	26.47	3.76
10-----	1.31	.56	1.63	.01	11.49	71.40	3.41	-	74.81	3.75
13-----	.29	-	-	.04	3.85	24.12	-	.85	24.97	3.18
25-----	.43	.21	-	-	3.34	21.85	.02	.69	22.56	2.58
17-----	.51	.03	-	.26	2.10	25.32	-	.69	26.01	2.57
4-----	.64	.09	.43	.10	4.05	35.17	-	.65	35.82	2.45
5-----	.65	.04	.53	-	3.72	30.92	.45	.58	31.95	2.09
6-----	.51	.06	.32	.22	4.78	27.00	-	.54	27.54	2.06
31-----	.77	.62	.80	.04	4.38	33.66	.81	.52	34.99	1.96
32-----	.54	.03	.38	-	7.69	32.62	1.67	.44	34.73	1.70
18-----	.15	.64	1.07	.03	5.06	31.04	1.43	.18	32.65	1.17
22-----	.81	.51	1.03	.17	4.32	36.73	.71	.30	37.74	1.13
11-----	.61	.13	.41	.23	4.93	31.50	-	.23	31.73	.86
30-----	.71	.03	-	.24	3.87	26.49	.31	.19	26.99	.71
2-----	.68	.26	.32	.02	2.60	32.29	.16	.13	32.58	.50
26-----	.52	.03	-	-	4.89	27.66	.64	.01	28.31	.04
15-----	.63	-	-	.44	4.07	32.43	-	-	32.43	.01
19-----	.47	.02	.37	-	4.26	23.68	.23	-	23.91	-.01
28-----	.55	.08	-	-	8.07	28.34	2.08	-	30.42	-.28
7-----	.76	.32	.23	.23	5.52	33.25	1.25	-	34.50	-.56
16-----	.65	.28	-	.02	2.86	30.40	-	-	30.40	-.82
34-----	.63	.02	.45	-	4.57	31.10	.47	-	31.57	-.84
14-----	1.23	.21	.38	.26	5.95	36.60	.51	-.25	36.86	-1.05
20-----	.36	-	-	.15	5.20	30.28	1.69	-	31.97	-1.68
12-----	.55	.17	.19	.23	5.10	29.60	.82	-	30.42	-2.13
23-----	1.10	-	.40	.47	5.22	38.65	.71	-	39.36	-2.30
24-----	.59	.01	.14	.02	5.70	34.83	1.69	-	36.52	-2.79
29-----	.73	.54	-	.01	5.88	29.97	1.37	-	31.34	-6.31
33-----	.82	.40	.28	-	6.87	34.56	1.33	-	35.89	-6.48
8-----	1.01	.09	.71	.39	6.64	58.91	.90	-	59.81	-11.79
21-----	.98	.58	.18	2.56	14.99	66.13	3.39	-	69.52	-25.91
9-----	1.32	.13	1.05	1.76	16.06	82.98	3.74	-	86.72	-27.59
Average <sup>2</sup> -----	.70	.18	.50	.22	5.23	34.11	.96	.46	35.23	-.55

<sup>1</sup>Includes social security tax, unemployment compensation tax, etc.<sup>2</sup>Average expense per locker for each item based on lockers rented in only those associations having the particular expense. Total average computed on basis of lockers rented in all associations.

SOURCE: Based on audit reports.

Table 6. - Savings or loss before income taxes and interest and net savings or loss as a percentage of gross income for 35 Illinois locker co-operatives, 1948-49

Association	Gross income	Savings or loss before income taxes and interest		Net savings or loss after income taxes and interest	
	Dollars	Dollars	Percent	Dollars	Percent
35-----	17,078.43	3,706.82	21.70	2,713.79	15.89
1-----	63,538.18	10,972.70	17.27	7,904.91	12.44
3-----	70,371.52	11,924.49	16.95	8,522.62	12.11
13-----	24,409.09	3,493.48	14.31	2,760.38	11.31
27-----	17,608.04	2,577.49	14.64	1,940.39	11.02
25-----	18,903.46	2,473.08	13.08	1,940.06	10.26
17-----	31,585.71	3,602.38	11.40	2,846.42	9.01
6-----	30,873.99	2,714.82	8.79	2,150.60	6.97
4-----	40,220.91	3,257.08	8.10	2,573.10	6.40
5-----	93,851.82	8,616.28	9.18	5,761.83	6.14
31-----	36,507.87	3,245.35	8.89	1,932.87	5.29
10-----	69,920.47	6,376.39	9.12	3,340.15	4.78
32-----	29,032.24	3,032.94	10.45	1,354.86	4.67
18-----	106,060.78	8,703.92	8.21	3,668.28	3.46
22-----	68,060.82	3,750.04	5.51	1,976.85	2.90
11-----	39,531.75	1,317.94	3.33	1,041.71	2.64
30-----	10,248.89	446.94	4.36	262.81	2.56
2-----	85,621.24	2,067.25	2.41	1,308.66	1.53
26-----	11,170.36	271.37	2.43	15.29	.14
15-----	13,818.75	3.11	.02	3.11	.02
19-----	25,410.51	239.56	.94	-6.30	-.02
28-----	37,916.84	2,271.24	5.99	-348.51	-.92
7-----	63,365.34	1,291.31	2.04	-1,053.23	-1.66
34-----	29,558.90	-362.05	-1.22	-814.02	-2.75
16-----	15,232.60	-423.23	-2.78	-423.23	-2.78
14-----	122,756.04	-2,705.89	-2.20	-3,587.07	-2.92
20-----	15,208.52	8.99	.06	-841.47	-5.53
23-----	40,655.82	-1,741.61	-4.28	-2,520.19	-6.20
12-----	61,211.18	-2,838.01	-4.64	-4,606.78	-7.53
24-----	51,341.80	-1,675.98	-3.26	-4,251.63	-8.28
33-----	29,584.20	-5,184.06	-17.52	-6,520.37	-22.04
8-----	71,256.67	-16,167.24	-22.69	-17,505.58	-24.57
29-----	14,592.61	-2,877.18	-19.72	-3,678.75	-25.21
9-----	38,555.05	-15,550.32	-40.33	-17,985.32	-46.65
21-----	23,200.65	-11,980.53	-51.64	-13,784.51	-59.41
Total-----	1,518,261.05	24,858.87	-	-23,908.27	-
Average-----	43,378.89	710.25	1.64	-683.09	-1.57

SOURCE: Based on audit reports.



taxes and interest, totaled \$24,859 or \$710 per association. Compared with a year ago, this represents an average decline of 78 percent in savings.

On a percentage basis, savings for the 35 associations averaged 1.64 percent of gross income before paying income taxes and interest, and a net loss of 1.57 percent after paying these expenses. Only 8 associations had savings of more than 10 percent, before income taxes and interest, while 11 associations showed a loss.

Table 7 shows net savings as a percent of gross income for the 9-year period 1940-41 through 1948-49. The period of greatest savings was from 1941 through 1944. Lower fixed costs, lower labor costs, and an active demand for lockers were largely responsible for these favorable operations. Since 1944 nearly all costs have advanced sharply, competition has been keener, and demand for lockers has declined.

Table 7. - *Savings or loss before income taxes and interest and net savings or loss as a percentage of gross income, Illinois locker cooperatives, 1940-41 to 1948-49*

Year	Savings before income taxes and interest	Net savings after income taxes and interest
	<i>Percent</i>	
1940-41-----	16.62	12.24
1941-42-----	20.51	15.59
1942-43-----	23.46	17.24
1943-44-----	18.02	13.31
1944-45-----	12.45	8.93
1945-46-----	14.44	10.39
1946-47-----	12.60	8.90
1947-48-----	7.73	3.82
1948-49-----	1.64	-1.57

SOURCE: Based on audit reports.

Table 8 shows savings, before paying income taxes and interest, compared with cost of fixed assets. Savings per association, as a percentage of investment, ranged from nearly 15 percent to a loss of 10 percent, and averaged .66 percent savings for the group. Of the 35 associations included in this analysis only one had savings of more than 10 percent of investment, 8 netted 5 to 9 percent, and 11 showed a loss.

Table 9 shows a comparison of savings before interest and income taxes as a percentage of investment for a 9-year period, 1940-41 through 1948-49. Savings ranged from .66 percent in 1948-49 to 14.56 percent in 1942-43. Here again the period of highest savings occurred during World War II and early postwar years, with sharp declines since 1947. Higher investment in facilities and increased operating costs combined with a drop in demand in rentals have accounted for declining savings in recent years.

Table 8. - Savings or loss as a percentage of investment in fixed assets before deduction of income taxes and interest for 35 Illinois locker cooperatives, 1948-49

Association	Fixed assets	Savings or loss	Savings or loss as percentage of fixed assets
13-----	\$23,690.64	\$3,493.48	14.75
27-----	27,998.03	2,577.49	9.21
35-----	41,724.12	3,706.82	8.88
17-----	40,767.80	3,602.38	8.84
1-----	134,182.84	10,972.70	8.18
3-----	149,230.23	11,924.49	7.99
6-----	39,708.65	2,714.82	6.84
25-----	39,246.25	2,473.08	6.30
4-----	57,249.36	3,257.08	5.69
31-----	74,671.96	3,245.35	4.35
5-----	201,169.37	8,616.28	4.28
10-----	195,356.48	6,376.39	3.26
18-----	301,896.70	8,703.92	2.88
11-----	46,957.12	1,317.94	2.81
32-----	110,130.44	3,032.94	2.75
22-----	141,112.45	3,750.04	2.66
30-----	21,399.77	446.94	2.09
2-----	116,747.90	2,067.25	1.77
28-----	174,420.45	2,271.24	1.30
26-----	28,320.53	271.37	.96
7-----	233,072.94	1,291.31	.55
19-----	60,901.83	239.56	.39
15-----	13,768.84	3.11	.02
20-----	64,141.87	8.99	.01
34-----	62,028.55	-362.05	-.58
24-----	199,165.14	-1,675.98	-.84
14-----	276,610.63	-2,705.89	-.98
23-----	97,514.90	-1,741.61	-1.79
12-----	153,043.37	-2,838.01	-1.85
29-----	61,840.52	-2,877.18	-4.65
16-----	8,890.43	-423.23	-4.76
33-----	106,394.91	-5,184.06	-4.87
21-----	142,651.95	-11,980.53	-8.40
8-----	178,591.41	-16,167.24	-9.06
9-----	157,166.86	-15,550.32	-9.89
Total or average-----	\$3,781,765.24	\$24,858.87	.66

SOURCE: Based on audit reports.

Table 9. - *Savings as a percentage of investment in fixed assets before payment of income taxes and interest, Illinois locker cooperatives,<sup>1</sup> 1940-41 to 1948-49*

Year	Savings as a percentage of investment
1940-41-----	6.77
1941-42-----	11.20
1942-43-----	14.56
1943-44-----	12.98
1944-45-----	7.86
1945-46-----	10.00
1946-47-----	11.34
1947-48-----	5.33
1948-49-----	.66

<sup>1</sup>Excludes various associations for specific years when such associations were undertaking major expansion programs.

SOURCE: *Based on audit reports.*

## PROCESSING AND SLAUGHTER VOLUME

Table 10 furnishes data on the total pounds of meat and poultry processed during the year by each association as well as the average pounds processed per locker rented. The 35 associations processed a total of more than 14 million pounds of meat and poultry and averaged 326 pounds per locker rented, compared with 327 pounds a year earlier. Pounds processed varied from 181 pounds to 607 pounds per locker rented. Seven associations, or 20 percent, processed over 400 pounds per locker; 12 associations, or 34 percent, processed between 300 and 400 pounds; and 16 associations, or 46 percent, processed less than 300 pounds per locker.

Table 11 shows the average number of pounds of meat and poultry processed for the 5-year period 1944-45 through 1948-49. Volume processed for this 5-year period ranged from a high of 425 pounds in 1945-46 to a low of only 326 pounds in 1948-49. Some factors probably responsible for this sharp decline in volume during the past 2 years are the increased cost of meat, a higher percentage of non-farm patrons, availability of meat through retail stores, increased locker rental and processing rates, and a lack of aggressive salesmanship on the part of locker operators.



Table 10. - Lockers rented, total pounds processed, and average pounds of meat and poultry processed per locker rented by 35 Illinois locker cooperatives, 1948-49

Association	Lockers rented <sup>1</sup>	Total pounds <sup>2</sup>	Pounds per locker rented
15-----	426	258,500	607
4-----	1,051	582,600	554
27-----	345	189,800	550
9-----	652	322,600	495
3-----	2,076	892,100	430
17-----	1,105	471,700	427
2-----	2,588	1,079,100	417
11-----	1,213	475,000	392
10-----	890	346,000	389
16-----	515	189,600	368
22-----	1,751	644,900	368
6-----	1,043	382,700	367
8-----	1,484	489,000	330
21-----	532	175,100	329
13-----	867	283,100	327
30-----	370	119,400	323
31-----	988	318,800	323
1-----	2,102	677,900	322
34-----	962	296,800	309
5-----	2,757	823,100	299
14-----	3,428	995,200	290
25-----	752	217,000	288
7-----	1,867	523,400	280
20-----	502	139,700	278
18-----	3,136	859,000	274
32-----	797	217,000	272
24-----	1,522	409,500	269
12-----	2,164	576,500	266
23-----	1,097	291,000	265
26-----	394	96,900	246
35-----	494	119,300	241
28-----	1,258	291,400	232
33-----	1,006	226,100	225
19-----	1,063	195,900	184
29-----	583	105,600	181
Total or average-----	43,780	14,281,300	326

<sup>1</sup>Lockers rented computed by dividing earned locker rental income by average rental rate. Includes temporary lockers.

<sup>2</sup>Poundage secured from association records or computed by dividing cutting, wrapping, freezing, and grinding income by rate for this service.

SOURCE: Based on audit reports.

Table 11. - *Average pounds of meat and poultry processed per locker rented by Illinois locker cooperatives, 1944-45 to 1948-49*

Year	Pounds per locker rented
1944-45-----	384
1945-46-----	425
1946-47-----	394
1947-48-----	327
1948-49-----	326

### SLAUGHTER VOLUME

Twenty-two of the 35 associations operated 23 slaughter plants during 1949. These 23 plants performed a slaughtering service for 56 locker plants with approximately 31,000 lockers.

Eighteen associations from which information was obtained slaughtered a total of 24,693 head of livestock in 1949, an average of 1,372 per association (table 12).

Cattle and calves totaled 7,294 head, or an average of 405 per association. Annual slaughter volume ranged from 66 head to 1,624 head per association. Volume was heaviest from November through March and lowest from July through September. Average monthly slaughter of cattle and calves varied from a low of 21 head in July to 51 head in December.

Hog slaughter volume totaled 17,399 head or 967 per association for 1949. Volume varied from 121 head to 2,714 head per association. Months of heaviest slaughter were from November through January and the lightest volume was from July through September. Average monthly hog slaughter ranged from 45 in August to 127 in December.

In most instances the number of animals slaughtered was substantially less than the volume of meat processed by the associations. This indicates that farmers are either slaughtering a sizable volume on their farms, are having their slaughtering done by outside slaughter plants or are buying packer beef and pork cuts. This relatively small volume explains, in part, the reason for the unsatisfactory showing made by slaughter departments of most associations.

Table 12. - Slaughter volume by months in 18 Illinois, locker cooperatives, 1948-49

Association	Cattle											
	January	February	March	April	May	June	July	August	September	October	November	December
5-----	37	49	77	67	65	41	23	36	32	32	33	34
7-----	37	39	37	35	26	30	22	27	22	21	31	31
8-----	124	144	166	138	190	190	51	54	57	30	61	419
9-----	64	22	55	54	42	41	26	28	18	16	58	19
10-----	40	43	38	41	41	41	40	62	71	51	74	53
12-----	42	45	38	30	25	22	43	41	36	37	23	37
14-----	64	67	75	60	47	38	32	38	46	32	59	58
18-----	43	44	53	63	42	47	24	28	32	27	22	26
19-----	25	16	33	20	12	18	12	6	14	11	21	17
20-----	13	12	9	6	3	3	1	0	5	5	7	10
21-----	18	13	14	11	28	20	15	15	9	37	25	11
22-----	51	52	68	55	43	39	25	35	30	43	27	32
23-----	39	47	19	31	22	40	29	31	26	22	24	44
26-----	8	6	9	6	4	5	4	5	4	3	5	7
31-----	29	31	26	22	16	16	7	6	8	17	25	32
32-----	21	30	24	17	4	8	12	13	32	26	22	28
34-----	14	25	23	23	19	14	6	10	22	7	38	26
36-----	3	10	7	9	9	6	9	14	6	8	24	24
Total-----	672	695	771	688	638	619	380	449	470	425	579	908
Average-----	37	39	43	38	35	34	21	25	26	24	32	51
5-----	160	122	149	149	117	97	51	57	76	190	170	161
7-----	127	92	54	55	60	57	37	45	56	66	84	125
8-----	70	143	97	94	112	96	47	47	55	100	103	80
9-----	65	24	44	46	28	32	18	20	30	36	74	36
10-----	277	207	265	220	228	250	131	159	203	172	266	336
12-----	140	88	50	59	73	59	48	52	42	83	124	157
14-----	181	79	117	87	64	74	66	65	96	76	171	171
18-----	246	168	138	127	131	142	124	106	121	188	268	277
19-----	62	39	41	25	15	21	12	18	22	24	53	55
20-----	58	65	47	40	35	22	20	11	25	28	30	50
21-----	134	87	82	94	54	148	34	23	74	123	145	138
22-----	138	117	139	83	84	71	50	41	69	116	137	136
23-----	66	64	56	88	98	71	54	59	48	74	92	96
26-----	14	12	9	10	6	8	7	5	7	8	15	20
31-----	80	77	78	63	45	29	26	38	36	64	79	83
32-----	67	27	39	25	21	30	23	21	26	41	61	99
34-----	34	57	73	44	32	55	42	24	48	67	72	68
36-----	31	63	31	30	45	31	36	28	26	48	90	195
Total-----	1,950	1,531	1,509	1,339	1,251	1,293	826	819	1,060	1,504	2,034	2,283
Average-----	108	85	84	74	70	72	46	45	59	84	113	127

SOURCE: Based on associations' records.



## LABOR AND MANAGEMENT EFFICIENCY

Labor, most of which is used in processing operations, consumes almost half of all locker plant income. A comparison of labor cost with processing income is one means of measuring the efficiency of labor utilization among associations. Labor and management efficiency, as used in this analysis, is defined as the amount of salaries and wages paid in a given period compared with total receipts from processing during the same period. In making such an analysis, it is recognized that part of the cost of labor should be charged to sales, and to the operation of the locker room. However, the amount of labor spent in the locker room is negligible, and except for a limited number of associations, the labor used in selling is small.

Although some refinements in this method of analysis are possible, the method does provide a very satisfactory basis for comparing labor and management efficiency among the associations. In table 13, each association's labor cost is compared by months with the income from its processing services. To facilitate comparisons, associations are grouped into those that perform slaughtering services and those that do not slaughter. On the average, labor and management cost was \$1.01 per dollar of processing income with a range from 67 cents to \$1.33. Associations with slaughter facilities had an average cost of \$1.03, per dollar of processing income while those without slaughter plants had a cost of 96 cents. One explanation for this higher cost is that associations with slaughter facilities may not have sufficient volume to efficiently utilize the amount of extra labor employed to perform the slaughter service.

Due to the seasonal variation in processing income, and a rather inelastic labor cost, there is a rather wide monthly variation in the cost of labor per dollar of processing income. Months of most efficient labor use were from December through March, while the months of least efficiency labor use were from July through September. Lowest labor cost per dollar of processing income was 78 cents in January and March, with highest cost of \$1.59 in July. In general, the winter months were the most efficient in the use of labor due to the high volume of meat processed during those months. June was also a relatively good month due to the large volume of fruits and vegetables processed. Figure 2 shows total processing income and total labor costs by months.

Labor costs exceeded processing income in 6 out of the 12-month period, while in one month they were equal and in 5 months labor costs were less than processing income. Compared with former years, labor costs compared with processing income have shown but little improvement (figure 3).

Table 14 compares labor cost with processing income for a 6-year period from 1943-44 to 1948-49. This indicates that in general the associations showed less efficiency in the use of labor in 1949 than in most of the previous years.

Table 13. - Labor and management costs per dollar of processing income, by months, 1948-49

Association and services	January	February	March	April	May	June	July	August	September	October	November	December	Total
Processing including slaughtering													
28-----	\$0.58	\$0.75	\$0.88	\$1.22	\$0.54	\$0.70	\$0.73	\$0.75	\$1.28	\$0.90	\$0.51	\$0.44	\$0.67
1-----	.59	.78	.63	.68	.94	.67	1.27	.96	.92	.94	.70	.70	.78
20-----	.53	.65	.54	1.03	1.21	1.12	1.46	1.44	1.10	.79	.48	.88	.81
26-----	.59	.74	.81	1.00	1.14	.91	1.11	1.24	1.40	.97	.62	.61	.83
35-----	.59	.75	.83	1.21	.86	.81	1.14	1.10	1.90	.95	.67	.87	.84
30-----	.87	.65	.65	.81	.93	.74	1.07	1.41	1.23	1.13	1.14	.60	.86
34-----	.84	.62	.75	1.05	.89	.81	1.79	1.21	1.56	.76	.57	.65	.87
32-----	.52	.86	.77	1.00	.87	1.40	1.24	1.15	1.09	1.26	.53	.64	.88
18-----	.66	.78	.79	.93	.87	.84	1.24	1.08	.94	1.20	.58	1.54	.90
33-----	.64	.71	.74	1.34	1.24	1.92	2.22	2.04	1.38	1.97	1.84	.72	.97
12-----	.72	.70	1.02	1.22	.79	.84	1.31	1.30	1.87	1.59	1.03	.72	.99
22-----	.76	.76	.95	.96	.96	.84	1.31	1.32	1.49	1.06	1.05	.84	.99
7-----	.65	.87	.83	1.30	1.19	1.10	1.52	1.58	1.42	1.37	1.95	.83	1.01
31-----	.76	.82	.93	.86	1.18	1.10	1.52	1.32	1.29	1.32	1.08	.69	1.02
24-----	.75	.77	1.05	1.68	1.04	.95	1.44	1.31	1.77	1.19	1.09	.79	1.05
5-----	1.09	1.02	.69	1.28	1.00	.89	1.74	1.37	1.94	1.10	1.12	.91	1.11
21-----	1.16	.96	1.02	1.19	1.12	1.87	1.45	1.65	1.08	.80	.96	.72	1.12
23-----	1.16	.97	.83	1.20	1.12	1.04	1.42	2.06	1.82	.99	1.04	.68	1.12
14-----	.78	.88	.88	1.26	1.02	1.36	2.04	1.54	1.58	1.42	1.97	.89	1.15
16-----	1.18	1.27	1.16	1.02	2.02	1.02	1.14	1.48	1.79	1.02	1.11	.73	1.18
8-----	1.88	.89	.87	1.39	1.01	.92	3.85	1.95	2.10	1.45	1.09	1.09	1.19
19-----	1.12	.74	.84	1.18	1.52	1.02	1.54	1.73	2.36	1.60	1.21	1.01	1.21
9-----	1.11	1.64	1.11	1.75	1.43	1.08	1.88	1.65	1.83	1.62	.89	.83	1.33
Average-----	.80	.85	.84	1.18	1.08	1.00	1.61	1.41	1.52	1.19	.90	.82	1.03
Processing without slaughtering													
1-----	.63	.55	.50	.83	.90	.65	1.10	.99	1.12	1.17	.84	.55	.74
25-----	.49	.54	.49	.98	.97	1.00	1.10	1.21	1.29	1.00	.92	.76	.80
6-----	.80	.65	.68	.89	.81	.73	1.82	1.06	1.31	1.26	.89	.94	.91
13-----	.66	.77	.74	1.60	.96	.84	1.60	1.76	1.15	1.36	1.86	.66	.91
4-----	.74	.64	.68	1.01	.87	.89	1.57	1.23	1.44	1.31	1.02	.98	.93
11-----	.68	.70	.66	.77	.89	1.09	1.77	1.76	1.33	1.46	.98	.72	.94
2-----	.81	.71	.58	.93	.89	1.15	1.80	1.94	1.97	1.49	.92	.73	1.00
15-----	1.07	1.13	.95	1.17	1.27	1.87	1.04	1.22	1.13	1.02	.66	1.04	1.01
29-----	.62	.87	.98	1.92	1.08	2.37	1.19	.85	1.80	1.98	.67	1.57	1.01
3-----	.73	.79	.88	1.42	1.39	1.11	1.85	1.54	1.61	1.84	1.04	.66	1.10
17-----	.99	.96	.93	1.36	1.94	1.73	1.97	1.77	1.86	1.54	1.32	1.19	1.33
Average-----	.74	.71	.67	1.00	1.02	1.00	1.55	1.45	1.50	1.41	.93	.75	.96
Combined average-----	.78	.80	.78	1.12	1.06	1.00	1.59	1.42	1.51	1.25	.91	.80	1.01

SOURCE: Based on associations' records.

FIGURE 2  
**LABOR AND MANAGEMENT COST COMPARED WITH PROCESSING  
 INCOME, ILLINOIS LOCKER COOPERATIVES, 1948-49**

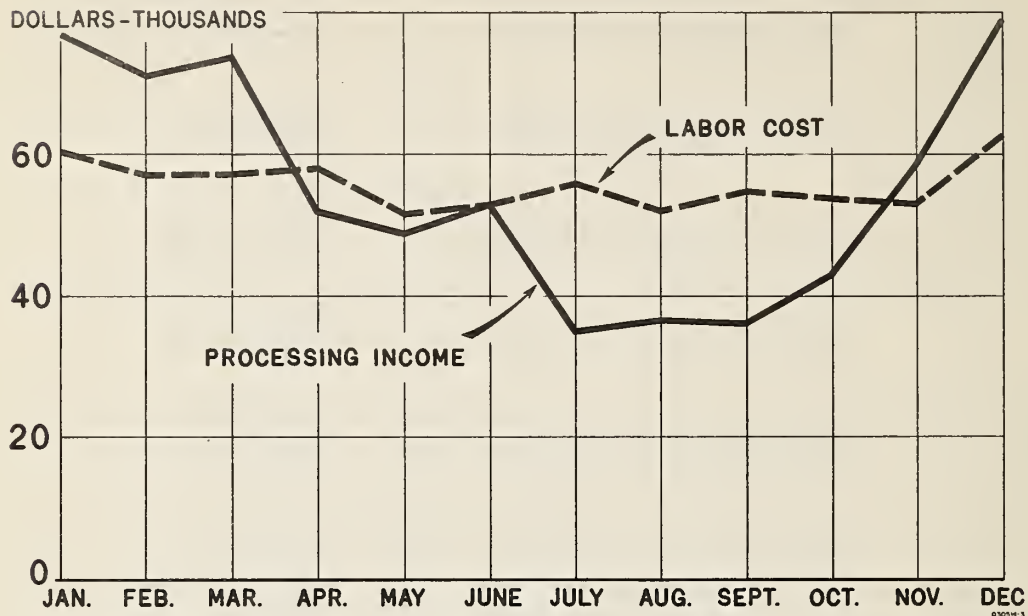
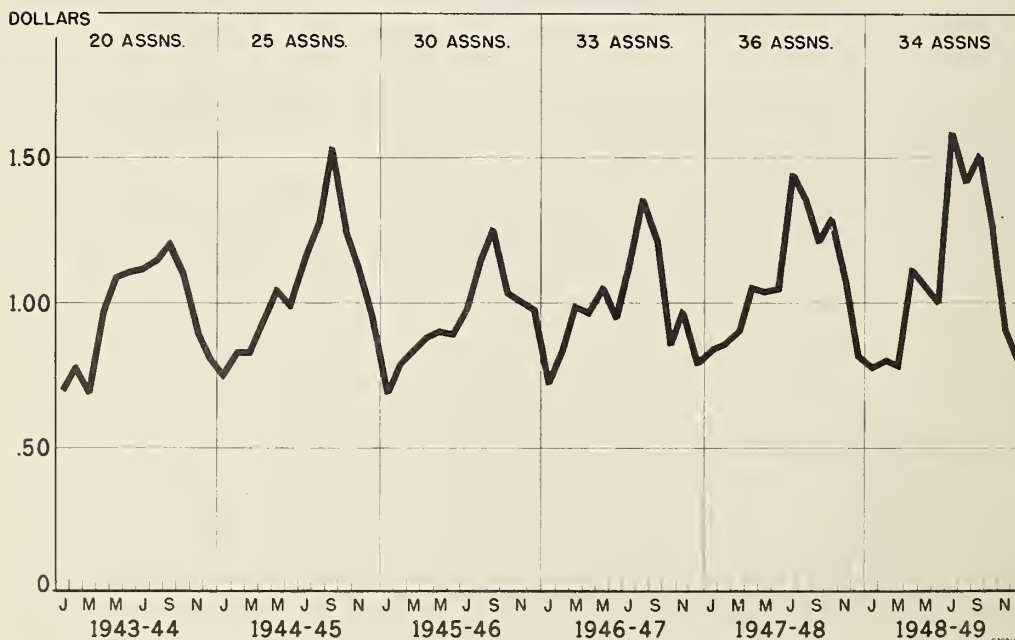


FIGURE 3  
**LABOR & MANAGEMENT COST PER DOLLAR OF PROCESSING  
 INCOME, ILLINOIS CO-OP. LOCKER ASSNS.  
 1943-44 TO 1948-49**





Because an increasing number of associations have expanded their merchandising services and for that reason utilize some labor in these activities, a comparison of labor cost with combined income from processing and gross margin on sales is shown. An analysis of these data indicate that while labor costs per dollar of processing income has increased since 1943-44, yet labor costs, when compared to total income from processing and sales, has declined from 91 cents in 1944-45 to 79 cents in 1948-49 (table 14). This illustrates the increasing importance of merchandising in locker plant operations.

Table 14. - *Labor and management cost per dollar of processing income and from processing and sales, Illinois locker cooperatives, 1943-44 to 1948-49*

Year	Per dollar of processing income	Per dollar of processing income and gross margin on sales
1943-44-----	\$0.92	\$0.83
1944-45-----	1.01	.91
1945-46-----	.92	.83
1946-47-----	.96	.77
1947-48-----	1.04	.76
1948-49-----	1.01	.79

Various comparisons were made between the 5 associations with the lowest labor cost per dollar of processing income and the 5 associations with the highest labor cost. The 5 associations with the lowest labor cost per dollar of processing income averaged 74 cents, while the 5 associations with the highest, averaged \$1.24 per dollar of processing income. In this discussion, the group with the lowest labor cost per dollar of processing income is termed the most efficient group and the high labor cost group the least efficient.

Average rates for processing were almost the same for both groups. Two of the 5 most efficient plants operated slaughter facilities, while 3 of the least efficient slaughtered. Other services were about the same for each group. The associations in the most efficient group, with one exception, each operated single locker plants, while 4 of the 5 least efficient associations operated from 2 to 3 plants. Of the 5 most efficient associations all but one, a newly opened plant, showed net savings while in the least efficient group all but one association reported losses for 1949.

The combined processing income and combined labor cost are shown in figures 4 and 5 for the two groups of associations. Combined processing income exceeded combined labor cost in all but 3 months in the 5 most efficient associations (figure 4), while in the 5 least efficient associations only 2 months out of 12 did processing income exceed labor cost (figure 5). For the most efficient group, yearly processing income averaged \$15,051 per association and labor cost \$11,201. In the least efficient group processing income averaged \$16,545 per association and labor cost \$20,517.

FIGURE 4

### LABOR AND MANAGEMENT COST COMPARED WITH PROCESSING INCOME IN 5 MOST EFFICIENT ASSOCIATIONS, 1948-49

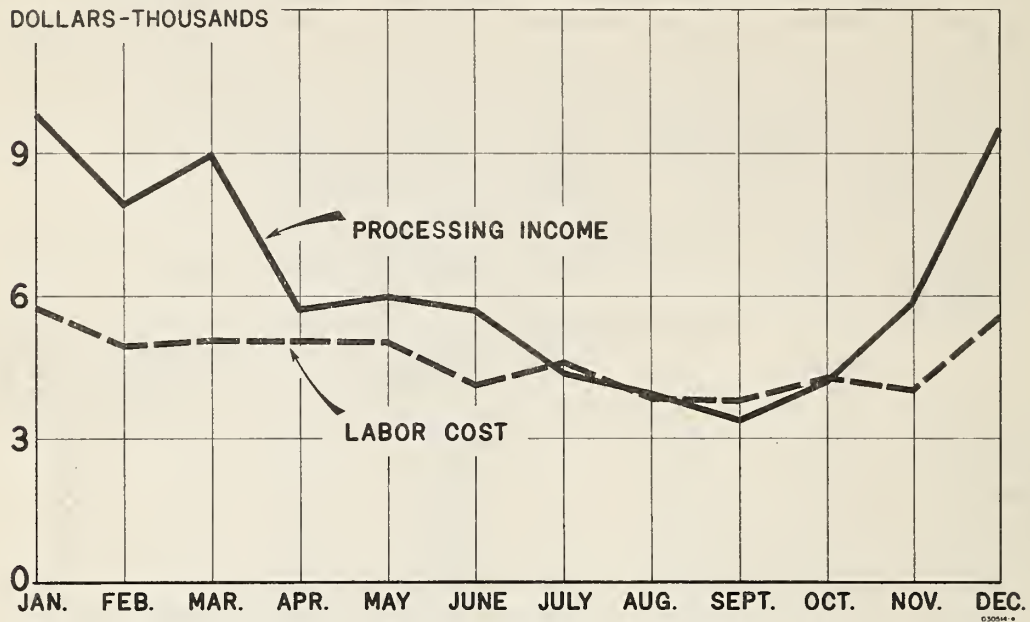
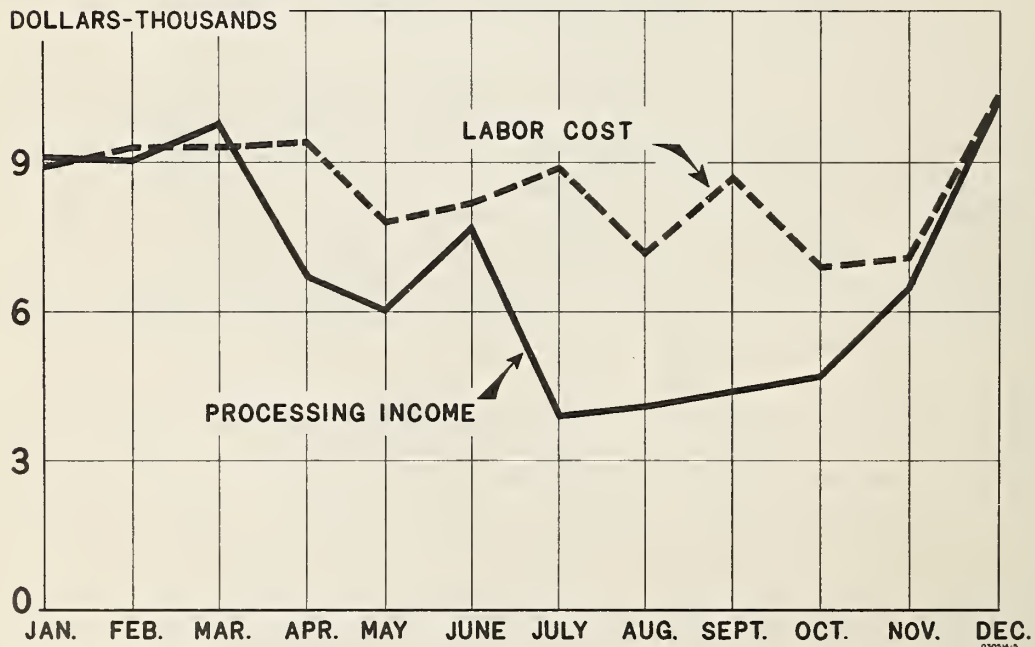


FIGURE 5

### LABOR AND MANAGEMENT COST COMPARED WITH PROCESSING INCOME IN 5 LEAST EFFICIENT ASSOCIATIONS, 1948-49



This analysis indicates that labor cost was the principal factor affecting savings as the least efficient associations reported higher receipts and processed a larger volume per locker than the more efficient associations.

### POWER CONSUMPTION

Utility costs are, on the average, the third largest expense in locker plant operation. Because of the interest in the amount of power consumed by locker plants, an analysis was made of kilowatt-hours consumed per locker capacity by months.<sup>4</sup>

Average annual consumption in 57 locker plants in 1948-49 was 71 kilowatt-hours per locker capacity, compared with 72 hours the previous year (table 15). Annual consumption ranged from 37 kilowatt-hours to 161 kilowatt-hours per locker in 1948-49. This wide variation is believed due to differences in efficiency in insulation and refrigeration equipment, water temperatures, volume of space refrigerated, processing services rendered, and total volume of food processed and stored. A comparison of the 10 high consumption plants with the 10 low consumption plants shows that, in general, the high consumption plants offered more processing services including slaughtering. It was also found that the low power consuming plants in general serviced very few branch plants while high power consuming plants processed for numerous branches.

<sup>4</sup>The term "locker capacity" is defined as the number of lockers that can be installed in existing zero-temperature rooms. On the average one locker requires 13.6 cubic feet of space.

Table 15. - *Kilowatt-hours of electricity consumed per locker, based on total capacity, by Illinois cooperative locker plants,<sup>1</sup> by months, 1943-44 through 1948-49*

Month	1943-44	1944-45	1945-46	1946-47	1947-48	1948-49
January-----	4.0	4.0	4.8	5.5	5.4	5.2
February-----	4.2	4.4	5.0	5.3	5.2	4.9
March-----	4.5	4.7	5.4	5.0	5.4	5.2
April-----	5.1	4.9	5.7	5.7	5.8	5.5
May-----	5.1	5.1	5.9	6.1	6.3	6.1
June-----	5.8	5.9	6.6	6.8	6.5	6.7
July-----	6.2	5.8	6.8	6.9	6.9	7.3
August-----	6.1	5.9	6.5	7.3	7.0	7.0
September-----	5.6	5.2	5.6	6.9	6.4	6.8
October-----	4.8	4.6	5.2	6.3	6.0	5.8
November-----	4.3	4.6	4.8	5.8	5.5	5.5
December-----	4.0	4.0	4.6	5.4	5.4	5.4
Total-----	59.7	59.1	66.9	73.0	71.8	71.4

<sup>1</sup>Excludes plants that do no processing.

SOURCE: Based on associations' records.



The average yearly power consumption per locker capacity steadily increased from 1943-44 to 1946-47, but showed a slight drop during the last 2 years (table 15 and figure 6).

Because a different number of plants were analyzed in each of these years, an additional comparison was made of power consumption for 1943-44 and 1948-49 of identical plants furnishing power data for both periods (table 16). The 16 plants thus analyzed showed an increase in kilowatt-hours consumed per locker capacity of nearly 6 kilowatt-hours, or

FIGURE 6

### AVERAGE KILOWATT-HOURS CONSUMED PER LOCKER ILLINOIS CO-OP. LOCKER PLANTS, 1943-44 TO 1948-49

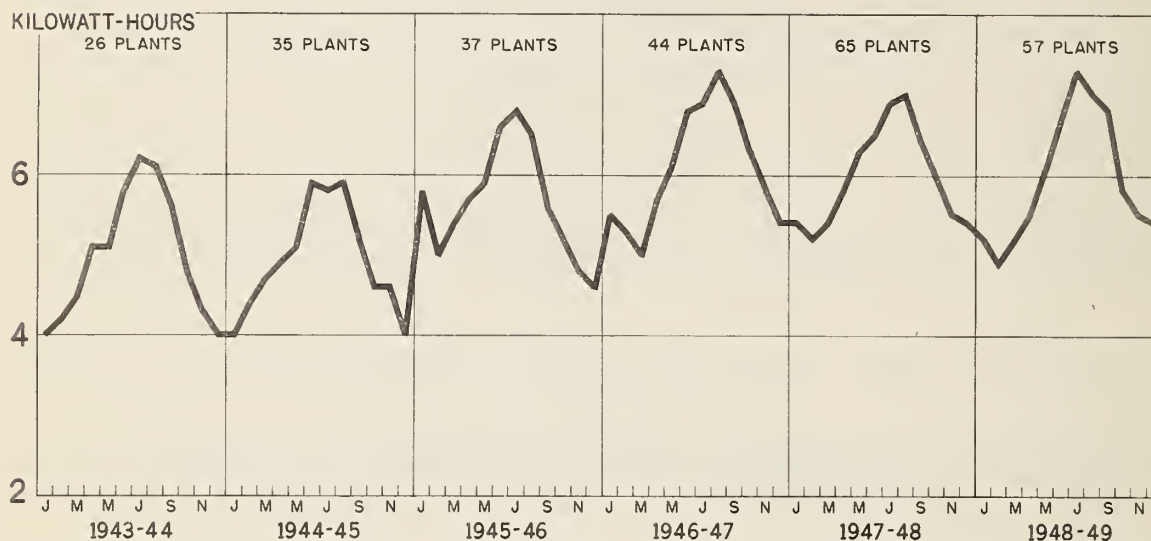


Table 16. - Average kilowatt-hours of electricity consumed per locker in 16 identical Illinois cooperative locker plants,<sup>1</sup> 1943-44 and 1948-49

Month	1943-44	1948-49
Kilowatt-hours		
January-----	3.96	4.54
February-----	4.08	4.48
March-----	4.51	4.66
April-----	5.25	5.26
May-----	5.58	5.64
June-----	6.01	6.42
July-----	6.28	6.77
August-----	6.07	6.40
September-----	5.33	6.49
October-----	4.82	5.35
November-----	4.21	4.92
December-----	3.83	4.74
Total-----	59.93	65.67

<sup>1</sup>Identical plants used for both years.

SOURCE: Field survey.



10 percent more in 1949 than in 1944. The table shows that power consumption was heavier in every month in 1948-49 than during the corresponding month of 1943-44. Some of this additional power consumption was due to expanded services but part of it was accounted for by decreased insulation and refrigeration efficiency.

A comparison of power consumption of plants performing processing services with non-processing plants is shown in table 17. Plants performing processing services averaged 71.4 kilowatt-hours per locker per year, compared with 52.4 kilowatt-hours for non-processing plants. In both cases, however, there was a wide variation among plants.

Table 17. - *Kilowatt-hours of electricity consumed per locker, based on total capacity, for processing locker plants and non-processing plants, by months, 1948-49*

Month	Processing locker plants	Non-processing locker plants
January-----	5.2	3.3
February-----	4.9	2.9
March-----	5.2	3.1
April-----	5.5	3.7
May-----	6.1	4.7
June-----	6.7	5.3
July-----	7.3	6.9
August-----	7.0	5.7
September-----	6.8	5.5
October-----	5.8	4.3
November-----	5.5	3.9
December-----	5.4	3.1
Total-----	71.4	52.4

SOURCE: *Field survey.*

## CONCLUSIONS AND SUGGESTIONS

Some of the major problems brought out in this study and suggested ways of meeting them are:

1. The study shows that most plants constructed since World War II, under high costs, are experiencing difficulty in effecting savings because of high fixed costs. Many of these plants were not being operated to capacity, which further increased costs per locker.
2. A substantial decline in processing volume was also evident in the case of many plants. Low volume increases the per unit cost, increases the unit cost of locker storage to patrons and adversely affects locker plant savings.

3. High labor costs is another cause of low savings on the part of many locker plants. The study shows that on the average associations spent more for labor than they received for processing. Out of the 34 associations studied only 18 received more income from processing than they spent for labor and management.

4. Power costs were very high in some plants. Some of the increased cost probably is due to deterioration of insulation and equipment. In other cases it may be due to faulty equipment, or to unsatisfactory water conditions. Such plants should have equipment and insulation checked and the necessary changes made. In some instances it may be desirable to install more efficient condensers, or water towers, while in others it may pay to provide wells in order to insure more satisfactory water temperatures and lower costs.

5. Some associations need to increase revenue by adding new services. In some cases this may call for installing new equipment while others can expand their volume with their present equipment.

6. Most locker plants, particularly those with slaughter facilities, have considerable quantities of edible byproducts which they do not utilize efficiently. In many instances there is no outlet for this product in its raw form and thus much of it is sold along with inedible offal to rendering companies. Utilization of edible byproducts in the manufacture of commercial type sausage is one of the best means of using these products.

7. While, on the average, 92 percent of lockers installed were rented, some associations reported only 75 percent rented. A high percentage of unrented lockers is another cause of losses or unsatisfactory savings in some of the associations.

8. Seasonal fluctuations in processing volume is another cause of unsatisfactory savings in many associations. Labor costs tend to remain constant from month to month, while volume processed fluctuates widely. This results in high unit costs during slack periods.

#### MAJOR FACTORS AFFECTING SAVINGS

From an over-all analysis of operations of the associations included in this study it appears that the most important factors adversely affecting savings are high labor costs, low processing volume, high investment costs, high power costs, and a low percentage of lockers rented.

As a means of testing the influence of these factors, an analysis was made of 10 associations showing the largest net savings per locker with 10 reporting the greatest losses. In the 10 associations reporting the greatest losses a high percentage of these unfavorable factors occurred, while in the 10 associations showing the largest savings only a small number were effected. While other factors or conditions influence savings or losses, yet, an association suffering from the condition

mentioned above should take steps to correct the situation. All of these factors, with the exception of high investment per locker, and in some cases high power consumption, lend themselves to improvement.

The findings of this study indicate the need for more efficient use of labor and facilities, increased volume, more efficient use of byproducts, closer attention to details and a study of internal costs, increased attention to improved processing methods, the addition of new services, evening out of seasonal processing volume, and a more aggressive and intelligent merchandising program with locker patrons, home unit owners, and others.

